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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/823,079  
Filing Date: March 30, 2001  
Appellant(s): HEIMAN ET AL.

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Alan G. Rego  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 10/7/2008 appealing from the Office action  
mailed 5/16/2008

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,712,553	Hallberg	1-1998
5,970,074	Ehiro	10-1999
4,764,652	Lee	8-1998

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5,386,183

Convich et al

1-1995

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Status:***

Claims 18-21, 23-31 and 33-36 are pending; claims 1-17, 22, 32 and 37 have been canceled. Claims 18-21, 23-31 and 33-36 are rejected as detailed below.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-20, 24-30 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 5,712,553 (Hallberg) in view of US Pat No 5,970,074 issued to Ehiro (hereafter Ehiro).

#### **Claims 18 and 28:**

Hallberg discloses:

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a multi-voltage power source having a first voltage output, which is capable of supplying a plurality of selectable voltage levels

[col 2, lines 55-63,

The present invention also provides a method for supplying at least two different voltages from a power supply having a plurality of batteries, including a first voltage from substantially all the batteries. The method comprises the steps of providing at least a second voltage from at least one battery, the second voltage being equal to a proportional fraction of the first voltage]

for a constant power supply voltage at a nominal power supply voltage of an electronic device

[col 1, lines 13-15,

Portable electronic devices sometimes require multiple voltages for operation]

an additional power source having a second voltage output, which is capable of supplying an additional voltage level that is different from the plurality of selectable voltage levels

[col 10, line 66 through col 11, line 12

In an alternative embodiment of the present invention, a first group of at least three batteries, or voltage subgroups is operatively connected to supply a first voltage, the power supply also providing at least a second and third voltage supplied from subgroups of the first group that includes at least one battery, the second and third voltages being less than the first voltage]

Hallberg discloses the elements of the claimed invention as noted above but does not disclose circuitry configured to introduce controllable disturbances into the constant power supply voltage. Ehiro discloses circuitry configured to introduce controllable disturbances into the constant power supply voltage [Figs 1, 4 and 5, col 7, lines 10-50]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hallberg to include circuitry configured to introduce controllable disturbances into the constant power

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supply voltage as taught by Ehiro for the purpose of measuring the threshold characteristic of a semiconductor integrated circuit [col 2, lines 15-20].

Claims 19 and 29:

The combination of Hallberg and Ehiro discloses the elements of the claimed invention as noted above and further Ehiro discloses wherein the disturbance is a rising pulse having a maximum voltage which is controllable [Fig 4, col 7, lines 10-20, alternatively, Test Step in Fig 5 can be interpreted as comprising a negative step pulse and a positive step pulse]

Claims 20 and 30:

The combination of Hallberg and Ehiro discloses the elements of the claimed invention as noted above and further Ehiro discloses wherein the disturbance is a low-going pulse having a minimum voltage being less than the nominal power supply voltage [Fig 5]

Claims 24 and 34:

The combination of Hallberg and Ehiro discloses the elements of the claimed invention as noted above and further Ehiro discloses a manually operated user interface used to control the disturbances [col 6, lines 35-45]

Claims 25 and 36:

The combination of Hallberg and Ehiro discloses the elements of the claimed invention as noted above and further Ehiro discloses wherein the disturbance is a plurality of pulses and a frequency and a number of pulses in the plurality of pulses are controllable [, col 6, lines 35-45, Fig 5]

Claim 26 and 35:

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The combination of Hallberg and Ehiro discloses the elements of the claimed invention as noted above and further Ehiro discloses wherein the disturbance is at least one pulse having a duration and a magnitude which are controllable [Fig 5]

Claim 27:

The combination of Hallberg and Ehiro discloses the elements of the claimed invention as noted above and further Ehiro discloses wherein the disturbance comprises a voltage sequence applied during powering up of the electronic device [Fig 5]

Claims 21 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hallberg and Ehiro and further in view of US Pat No 5,386,183 (Cronvich), hereafter Cronvich.

Claim 21 and 31:

The combination of Hallberg and Ehiro discloses the elements of claims 18/28 as noted above but does not disclose wherein the constant power supply voltage is selected from the group of voltages consisting of +5 VDC and +12 VDC. Cronvich discloses wherein the constant power supply voltage is selected from the group of voltages consisting of +5 VDC and +12 VDC [Fig 3 and col 12, lines 23-26]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify then above combination of references to include wherein the constant power supply voltage is selected from the group of voltages consisting of +5 VDC and +12 VDC as taught by Cronvich for the purpose of providing a power source suitable for many microcomputer and logic circuits [col 12, lines 23-26].

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Claims 23 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hallberg and Ehiro and further in view of US Pat No 4,764,652 (Lee et al), hereafter Lee.

Claims 23 and 33:

The combination of Hallberg and Ehiro discloses the elements of claims 18 and 22/ 28 and 32 as noted above but does not disclose wherein the additional voltage is +24VDC. Lee discloses +24VDC [col 1, lines 55-60]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above combination of references to include wherein the additional voltage is +24VDC as taught by Lee for the purpose of including a power supply voltage that is used for telecommunications equipment [col 1, lines 55-60].

**(10) Response to Argument**

Appellant states on page 4 of the brief:

In an attempt to demonstrate that Hallberg shows that both a multi-voltage power source and an additional power source as featured by claim 18, the Office Action combines a multi-voltage power source from one embodiment (described in column 2, lines 55-63, cited in the Office Action) with a multi-voltage power source of a different embodiment (described in column 10, line 66 through column 11, line 12 cited in the Office Action). Appellants respectfully point out that such an attempt to combine examples of a single power source to reject an invention with multiple power sources is improper.



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Examiner is not persuaded.

Hallberg states in column 2, lines 55-67:

**Preferred Method**

The present invention also provides a method for supplying at least two different voltages from a power supply having a plurality of batteries.

Hallberg states column 12, line 66 through column 11, line 12:

**Alternate Embodiment**

In an alternate embodiment of the present invention a first group of at least three batteries, or voltage subgroups is operatively connected to supply a first voltage, the power supply also providing at least a second and third voltage supplied from subgroups of the first group that includes at least one battery .....” Furthermore, Hallberg discloses “in this manner, greater differentials between voltage levels are created and additional groupings of batteries used to supply that at least three voltages are possible.”

Examiner maintains the preferred method and the alternate embodiment disclosed by Hallberg may be combined because the alternate embodiment supplements the preferred method while no conflict is produced. The preferred method includes “at least two different voltages” and therefore, a third voltage, i.e., of the alternate embodiment, may be included because the preferred method is **not** (emphasis added) restricted to two and only two voltages. Furthermore, the alternate embodiment includes a first voltage, a second voltage and a third voltage. Clearly, the at least two different voltages of the preferred method can be substituted for the first voltage and the second voltage of the alternate embodiment.

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Furthermore, in the appeal brief, Appellant states that Hallberg does not disclose the following claim 18 limitations:

a multi-voltage power source having a first voltage output, which is capable of supplying a plurality of selectable voltage levels for a constant power supply voltage at a nominal power supply voltage of an electronic device.

an additional power source having a second voltage output, which is capable of supplying an additional voltage level that is different from the plurality of selectable voltage levels.

Examiner is not persuaded. MPEP 2114 Apparatus and Article Claims states:

Apparatus claims must be structurally distinguishable from the prior art

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.

*In re Schreiber* 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997).

Furthermore, MPEP 2114 states:

Apparatus claims cover what a device is, not what a device does. *Hewlett-Packard Co. v.*

*Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)

Furthermore, MPEP 2114 states:

Manner of operating the device does not differentiate apparatus claim from the prior art

A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus

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if the prior art teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

The above claim limitations of claim 18 are directed to a power tester. A power tester is apparatus. Appellant fails to claim structure related to:

1. selectable voltage levels
2. constant power supply voltage
3. nominal power supply voltage
4. an additional power source
5. second voltage output

The language of claim 18 recites function and is **devoid** (emphasis added) of structure related to the above features of the power tester. Examiner maintains that Hallberg teaches all the structural limitations of claim 18 as the structural limitations are properly mapped to the teaching of Hallberg in above rejection of claim 18, i.e., Section 9, Grounds of Rejection.

Appellant states in Reply to Notice of Non-Compliant Appeal Brief filed 1/8/2009:

The additional power source would have been obvious to one of ordinary skill in the art when looking at Applicant's specification at the time the invention was made.

Examiner maintains, based on above disclosure by Appellant, that it would have been obvious to one of ordinary skill in the art to interpret the disclosure of Hallberg. In column 1, lines 10-25, Hallberg discloses that a portable electronic device requires power to be supplied at a particular

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voltage. Hallberg discloses that voltages can be obtained by the series combination of one, two or three or more batteries. One of ordinary skill in the art would have considered it obvious to connect one or more batteries in series to obtain the correct voltage such that power can be supplied to the portable electronic device under consideration. Furthermore, it would have been obvious to one of ordinary skill in the art to provide any number (emphasis added) of additional power sources such that power can be safely provided to the electronic devices under consideration.

Claim 18 recites “circuitry to introduce controllable disturbances into the constant power supply voltage.”

Hallberg discloses the elements of the claimed invention as noted above but does not disclose circuitry configured to introduce controllable disturbances into the constant power supply voltage. Ehiro discloses circuitry configured to introduce controllable disturbances into the constant power supply voltage [Figs 1, 4, 5 and col 7, lines 10-50]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hallberg to include circuitry configured to introduce controllable disturbances in to the constant poer supply circuitry for the purpose of measuring the threshold characteristic of a semiconductor integrated circuit [col 2, lines 15-20].

On page 5, of the Appeal Brief, Appellant questions the Ehiro reference. Examiner is not persuaded. Examiner provides the following additional explanation regarding the claim 18

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limitation “circuitry configured to introduce controllable disturbances into the constant power supply voltage.”

Consider claimed “constant power supply voltage.” Ehiro discloses in Figure 5, the constant power supply voltage of 5.00 Volts. Examiner notes the constant power supply voltage of 5.00 Volts taught by Ehiro is **precisely** (emphasis added) the same as the constant power supply voltage of +5 VDC claimed in claim 21 of the present invention. Still further, Ehiro discloses in column 7, lines 50-55, DUT 2 composed of CMOS type semiconductor integrated circuit, requires a power supply voltage  $V_{DD} = 5.00 \text{ V}$ . The claim 18 limitation “constant power supply voltage is anticipated by  $V_{DD} = 5.00 \text{ V}$  as disclosed by Ehiro.

Consider the claimed “controllable disturbances in the constant supply voltage.” Clearly, the disturbances in Figure 5 are controllable because the disturbances cause the nominal 5.00 Volt power supply to become 4.99V, 4.98V, 4.97V.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Conferees:

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